PHET SIMULATION: Solids, Liquids, Gases, and Gas Laws

http://phet.colorado.edu/en/simulation/gas-properties

I CAN: use the kinetic theory to explain the behavior of solids, liquids, and gasses.

ALL ANSWERS TO THE FOLLOWING QUESTIONS WILL BE ON A SEPARATE SHEET OF PAPER!

1. Open *Gas Properties* and then use the pump to put a little gas into the box.
    a. Observe gas particles' behavior.
    b. Pump in some lighter particles and **ON A SPEPERATE SHEET OF PAPER** list the similarities and differences that you see between heavy and light particles.
    c. Use the simulation to see how changing the temperature affects the behavior of the gas particles.
    d. Write a description for a gas based on your observations; include a drawing to help with your description.

2. How fast do you think the air particles in this room are moving compared to a car going 50 mph (about 22m/s)?

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3. Using the simulation, test your idea from question 2 and give evidence to support or revise your thoughts. For evidence, include how you used the simulation to collect data, and any calculations you used to find this answer.

4. Sketch a graph of Kinetic Energy (motion of particles) vs. Temperature. Use this graph to describe the relationship between kinetic energy and temperature.

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5. Write a paragraph that explains the differences and similarities between solid, liquid and gas particle motion; include drawings to help with your explanations.

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